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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,433	07/25/2001	Paul W. Lyons	SAR 13940	4855

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EXAMINER

MANNING, JOHN

ART UNIT PAPER NUMBER

2614

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/912,433	Applicant(s) LYONS ET AL.	
	Examiner John Manning	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/12/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 1, 12, 15 and 18 are objected to because of the following informalities:
there is insufficient antecedent basis for the recited limitations "the compressed commercial" and "the number of pictures".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-12, 15-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Tahara et al. (US Pat App Pub No 2002/0080875).

In regard to claims 1, 12, 15 and 18, Tahara discloses a method and apparatus for seamlessly splicing two encoded video streams. The claimed step of "manipulating the commercial slot vbv-delay between one of a minimum delay and a maximum delay" is met by Figures 4A-4C and 21A-21C. "In order to prevent discontinuity of the locus of the data occupancy quantity in the VBV buffer around the splicing point SP of the spliced stream ST_SPL, the initial level of the data occupancy quantity of the substitute

Art Unit: 2614

stream ST_NEW of the spliced stream ST_SPL in the VBV buffer must be that of the data occupancy quantity VBV_OLD in the VBV buffer. As a result, as shown in FIGS. 4A to 4C, if the value of the data occupancy quantity VBV_NEW of the substitute stream ST_NEW in the VBV buffer is smaller than the value of the data occupancy quantity VBV_OLD of the original stream ST_OLD in the VBV buffer, the VBV buffer will overflow at the part of the substitute stream ST_NEW of the spliced stream ST_SPL. Further, if the value of the data occupancy quantity VBV_NEW of the substitute stream ST_NEW in the VBV buffer is greater than the value of the data occupancy quantity VBV_OLD of the original stream ST_OLD in the VBV buffer, the VBV buffer will underflow at the part of the substitute stream ST_NEW of the spliced stream ST_SPL" (Paragraph 0021). "In order to realize the above objectives, a system for seamlessly splicing two encoded video streams is provided. In one implementation of the system, one or more coding parameters are extracted from the first and/or second encoded streams and one or more parameters of the first and/or second encoded streams are changed in accordance with the extracted parameter(s) in order to effectuate seamless splicing. In another implementation, the coding parameters applied to the first encoded stream are referenced when encoding the second stream such that the resulting second encoded stream can be seamlessly spliced with the first encoded stream" (Paragraph 0043). "The stream processor 503 is a circuit for changing the coding parameters, the data elements and the flags of the stream ST.sub.OLD and the stream ST.sub.NEW so that a spliced stream ST.sub.SPL generated by splicing the stream ST.sub.OLD and the stream ST.sub.NEW becomes a seamless stream. Specific processing carried out by

Art Unit: 2614

the stream processor 503 will now be described with reference to FIGS. 21A to 21B” (Paragraph 0189). “First, if the splice controller 500 has determined that value $VD(I6)$ of vbv_delay of the picture $I6$ of the original stream $ST.sub.OLD$ and the value $VD(I6')$ of vbv_delay of the picture $I6'$ of the substitute stream $ST.sub.NEW$ at the splicing point $SP1$ are different from each other, the splice controller 500 instructs the stream processor 503 to rewrite the value of vbv_delay of the picture $I6'$ described in the substitute stream $ST.sub.NEW$ from $VD(I6')$ to $VD(I6)$ ” (Paragraph 0196). The claimed step of “outputting pictures from the compressed commercial slot for at least a portion of the network time slot duration” is met by Figure 2A. “FIGS. 2A to 2C illustrate editing processing at each local station. FIG. 2A shows an original television program $PG.sub.OLD$ produced at the key station. FIG. 2B shows a substitute television program $PG.sub.NEW$ for local viewers produced at a local station. FIG. 2C shows a television program $PG.sub.EDIT$ edited at a local station. The example of editing processing shown in FIGS. 2A to 2C is an example of editing processing for replacing a commercial $CM1$, a program 3 and a commercial $CM3$ of the original television programs transmitted from the key station with a commercial $CM1'$, a program 3' and a commercial $CM3'$ produced at the local station for local viewers. As a result of this editing processing at the local station, television programs for local viewers are produced in which the television programs produced at the key station (that is, a program 1, a program 2, a $CM2$ and a program 4) and the television programs produced at the local station (that is, the commercial $CM1'$, the program 3' and the $CM3'$) coexist.” (Paragraph 0004) The claimed step of “determining the number of pictures remaining

Art Unit: 2614

from one of a stored portion of the incoming network feed and the commercial slot and adjusting the output rate as required to output the commercial slot” is met by the MPEG encoder block 35 of Figure 7. “The MPEG encoder block 35 carries out control of statistical multiplexing for dynamically changing the transmission rate of the transmission program of each channel in accordance with the pattern of video data to be coded. According to this statistical multiplexing technique, in the case where the pattern of a first picture of a transmission program of a channel is relatively simple and requires only a small number of bits for coding while the pattern of a second picture of another program is relatively complicated and requires a large number of bits for coding, bits for coding the first picture of the one channel are allocated to bits for coding the second picture of the other channel, thereby realizing efficient use of the transmission link. The method for dynamically changing the coding rate of each video encoder will be briefly described hereinafter” (Paragraph 0095). The claimed step of “adjusting one of the vbv-delay of stored network feed and the vbv delay of the local commercial slot to match the vbv-delay of the incoming network feed.” is met by Figures 4A-4C and 21A-21C (See Paragraph 0021).

In regard to claim 2, as discussed above, if the vbv_delay of the spliced segment needs to be the same as the vbv_delay of the original programming for a seamless splice. The vbv_delay of the spliced segment is accordingly adjusted to achieve a seamless splice. If the vbv_delay of the original programming is at the maximum delay, the vbv_delay of the spliced segment will be adjusted to a maximum delay.

In regard to claims 3 and 8, the spliced segment is out for viewing.

In regard to claim 4, the claimed step of “outputting any remaining pictures from the commercial slot by, storing at least a portion of the incoming network feed, outputting the remaining pictures at an increased output rate and then outputting the stored portion of the network feed and adjusting network time slot vbv_delay until the vbv_delay of stored network feed matches the vbv_delay of the incoming network feed” is met by is met by Figures 4A-4C and 21A-21C (See Paragraph 0021).

In regard to claims 7, 10 and 16 as discussed above, if the vbv_delay of the spliced segment needs to be the same as the vbv_delay of the original programming for a seamless splice. The vbv_delay of the spliced segment is accordingly adjusted to achieve a seamless splice. If the vbv_delay of the original programming is at the minimum delay, the vbv_delay of the spliced segment will be adjusted to a minimum delay. Where 30-second commercial slots are commonly 29.5 seconds.

In regard to claim 9, the claimed step of “determining the number of pictures remaining from the commercial slot and adjusting the output rate as required to complete the network time slot duration, and adjusting the local commercial slot vbv_delay to match the vbv_delay of the incoming network feed” is met by is met by Figures 4A-4C and 21A-21C (See Paragraph 0021).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2614

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6, 11, 13-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara et al.

In regard to claims 5 and 13, 30-second commercial slots are commonly 29.5 seconds. Given a vbv_buffer with a maximum of 0.5 seconds and both a slice in and slice out point, the maximum duration would be 30.5 second. The reference however, fails to disclose a vbv_buffer with a maximum. The examiner takes Official Notice that it is notoriously well known in the art to have a vbv_buffer with a maximum of 0.5 seconds so as to conform to the ATSC standard. Consequently, it would have been obvious to one of ordinary skill in the art to modify the reference with a vbv_buffer with a maximum of 0.5 seconds for the stated advantage.

In regard to claims 6 and 14, the reference discloses using Decode Time Stamps for determining the duration of the slot. The reference fails to disclose the use of a time tolerance. The examiner takes Official Notice that it is notoriously well known in the art to utilize a time tolerance so as to be able to explicitly quantify the operational parameters of a system. Consequently, it would have been obvious to one of ordinary skill in the art to modify the reference with a time tolerance for the stated advantage.

In regard to claims 11 and 17, when 29 seconds of a 29.5 second commercial have been outputted, it is inherent that 15 pictures would remain in the buffer. The reference fails to disclose the use of a time tolerance. The examiner takes Official Notice that it is notoriously well known in the art to utilize a time tolerance so as to be able to explicitly quantify the operational parameters of a system. Consequently, it

would have been obvious to one of ordinary skill in the art to modify the reference with a time tolerance for the stated advantage.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows:

Bock et al (US Pat No 6,370,199)

Wine et al (US Pat No 6,137,834)

Yamato et al. (US Pat No 6,345,122)

Chen et al. (US Pat No 5,917,830)

Perkins et al. (US Pat No 5,859,660)

Hurst et al. (US Pat No 6,038,000).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM

December 5, 2005



JOHN MILLER
SUPERVISORY PATENT EXAMINER
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